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Title: LANL Projects to Address the 2017 EM Assessment of Ion Beam Facility

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# **LANL Projects to Address the 2017 EM Assessment of Ion Beam Facility**

## Roof Life Extension Project

**\$2M (20 year roof), Completed in FY2019 - funded by Indirect through RAMP**



Before Roof Life Extension



After Roof Life Extension

**Pg17. Report (“Address the roof in-leakage problem”)**

# Ion Beam Tank Farm Removal Project \$331K, Completed FY2019

Before

Tank Farm



Diesel Tank



After

Tank Farm removed



Diesel Tank removed



**Pg 17. "NNSA should verify the status of the all the tanks in the tank farm. Verify the tanks are empty ... prior to transfer." Page 20 "Inspect and verify Diesel Tank (03-0191) is empty and Isolated."**

## **Ion Beam Risk Reduction Project**

**\$2.2M, Completed in FY21, pending closeout**

- Project to remove and cap at roof remaining fume hoods, glove boxes and vent stack openings and to seal openings after removal.
- Remove control cabinets and all wiring in cabinets.
- The floor penetrations will be sealed by plywood for safety.
- Rooms 120, 66 and 45 have hoods and duct work that is contain high levels of Radiation will need to be sealed properly. Room 46 has a sandblaster which also contains high levels of radiation and will also need to be contained and sealed properly.

**Pg 20. "Ensure the remaining fume hoods, glove boxes, and vent stack openings have sealed covers to prevent inadvertent wafting of airborne tritium that may result from opening of exterior doors or changes in barometric pressure."**

# Ion Beam Risk Reduction Project (cont'd)

## First Floor Laboratory Contaminated Hood and Ducting Removal - Room 120

Before



After



Pg 20. "Ensure the remaining fume hoods, glove boxes, and vent stack openings have sealed covers to prevent inadvertent wafting of airborne tritium that may result from opening of exterior doors or changes in barometric pressure."

# Ion Beam Risk Reduction Project (cont'd)

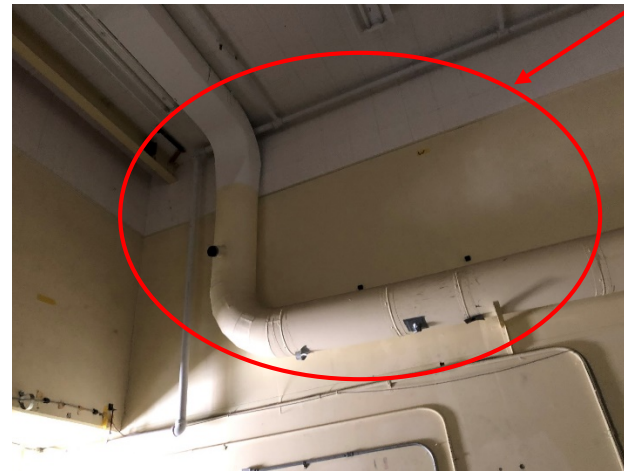
## Contaminated Hood and Ducting Removal - Basement

Before

Hood and  
Ducting



Ducting

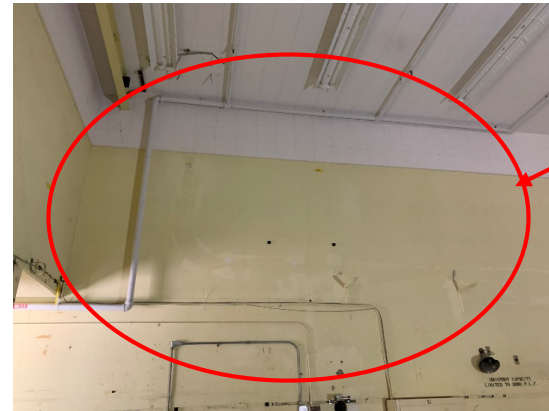


After

Hood and  
Ducting  
removed



Ducting  
removed

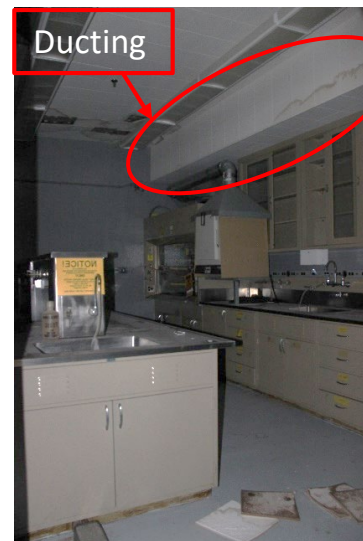
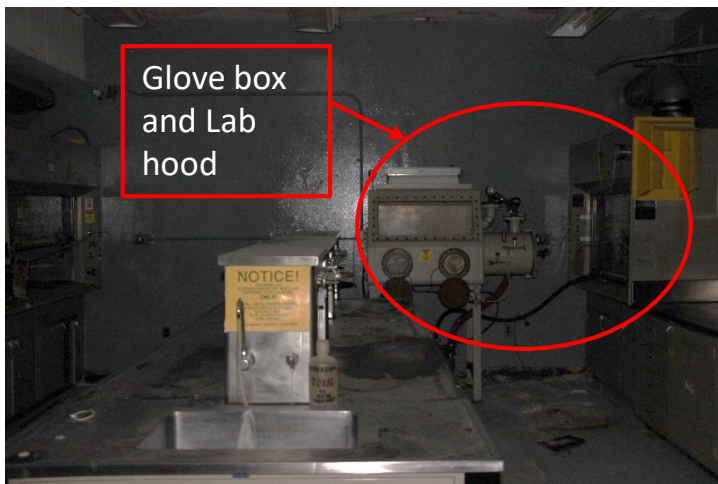


Pg 20. "Ensure the remaining fume hoods, glove boxes, and vent stack openings have sealed covers to prevent inadvertent wafting of airborne tritium that may result from opening of exterior doors or changes in barometric pressure."

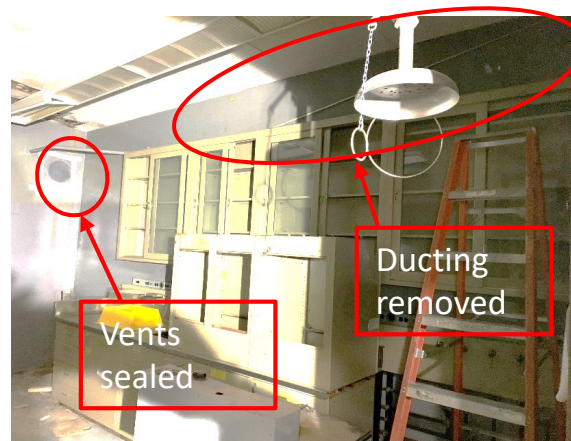
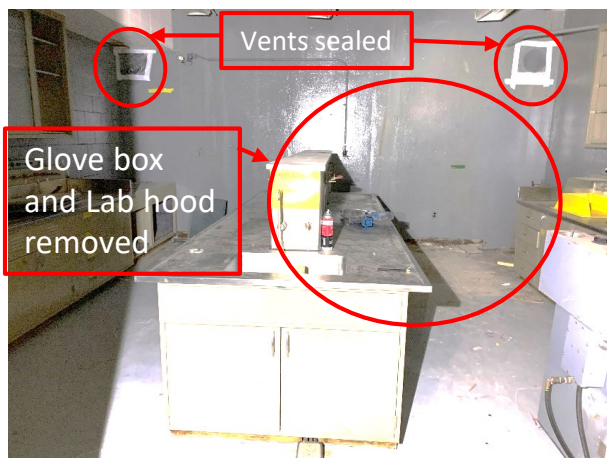
# Ion Beam Risk Reduction Project (cont'd)

## Basement Floor Laboratory Hood, Glove Box and Ducting Removal – Room 45

Before

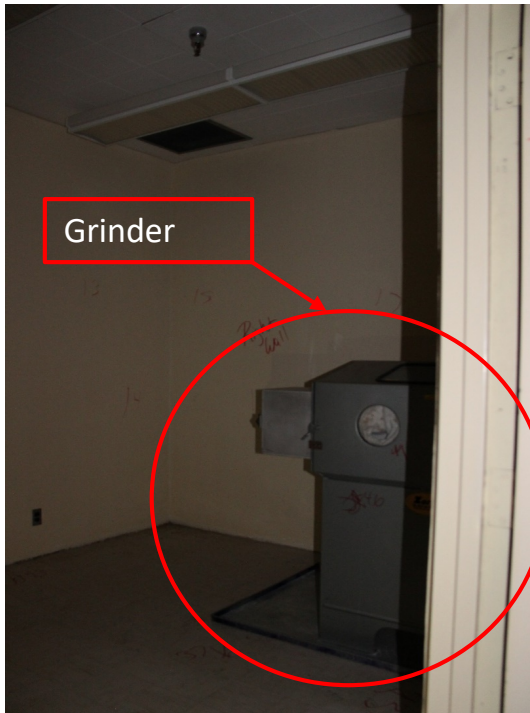


After



# Ion Beam Risk Reduction Project (cont'd)

## Removal of Grinder – Basement Floor –Room 46

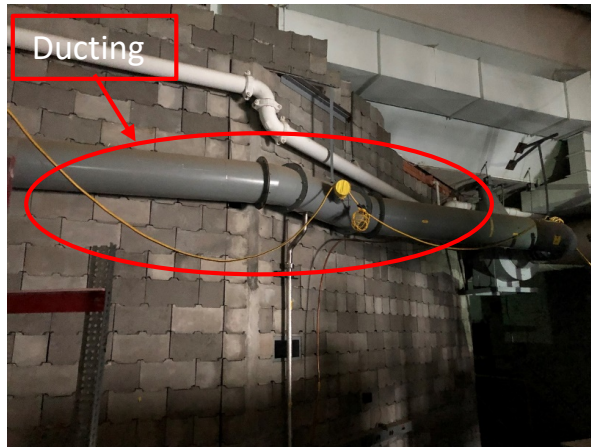


Pg 20. "Ensure the remaining fume hoods, glove boxes, and vent stack openings have sealed covers to prevent inadvertent wafting of airborne tritium that may result from opening of exterior doors or changes in barometric pressure."

# Ion Beam Risk Reduction Project (cont'd)

## Basement Ducting Removal Adjacent to Horizontal Accelerator

Before



After



Pg 20. "Ensure the remaining fume hoods, glove boxes, and vent stack openings have sealed covers to prevent inadvertent wafting of airborne tritium that may result from opening of exterior doors or changes in barometric pressure."

# Additional Programmatic Items Removed

## Horizontal and Vertical Accelerator Control Panels (First Floor)

Before



After



## Additional Actions

- Characterization of facility and class 3 estimate (~\$1M) to be completed by the end of FY21.
- The scale and maintenance of the roll up doors.
  - Scale originally scoped within project under the assumption that the scale would be recalibrated and used during project execution. During the execution of the project, the subcontractor brought a scale and the LANL scale was deemed not necessary to use. Both roll up doors underwent maintenance to facilitate the execution of the Risk Reduction Project. Will be maintained as necessary for activities within building if necessary.

Note: The additional actions listed are not recommended actions from the 2017 Walkdown report but will assist in transition to EM.

## Remaining Actions from 2017 Walkdown report

- NNSA needs to completely disconnect and air gap the RLW system.
  - The air gap will be performed at the main shutoff valve at the time of demolition; the RLW mainline will remain active.